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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,860

09/08/2006

Roeloeff Marissen

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EXAMINER

WOOD, ELLEN S

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/05/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,860	Applicant(s) MARISSEN, ROELOEF	
	Examiner ELLEN S. WOOD	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/05/2009; 06/28/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 13-15 in the reply filed on 11/05/2009 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Benjamin et al. (GB 1386953, hereinafter "Benjamin").

In regards to claim 13, Benjamin discloses a molded hollow article, such as a helmet, which comprises heating a sheet of thermoplastics polymer to a temperature between $X^{\circ}\text{C}$ and $(X-35)^{\circ}\text{C}$ where X is the crystalline melting point of crystalline polymers, clamping the sheet at its periphery by means of heated clamping rings and pressure slip-forming the sheet around a mold (pg. 2 lines 114-125). Fig. 1 shows a curved object in one or more directions.

Absent a showing to the contrary, it is Examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a

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product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to Applicant to show unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if Applicant intends to rely on Examples in the specification or in a submitted declaration to show unobviousness, Applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatnagar et al. (US 6,846,758, hereinafter "Bhatnagar").

In regards to claims 15-16, Bhatnagar discloses woven fabric laminates having superior resistance to penetration by ballistic projectiles, assemblies, thereof, and the method by which they are made (abstract). The fabric laminate is considered at least

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one ply containing polymeric fibers. The yarns and fabrics of the invention may be comprised of one or more different high strength fibers (col. 6 lines 47-50). The yarns comprising the fabric component of the inventive laminates may be from different denier (col. 6 lines 1-5). Thus, it would be obvious to one of ordinary skill in the art at the time of the invention that the object would exhibit different mean fiber diameter in different locations. It should be noted that the difference between the greatest and smallest mean value is result effective variable. As the difference between the greatest and smallest mean value of the diameters of the fibers increases, the material has a lower resistance to ballistic projectiles. Absent unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the difference between the greatest and smallest mean value of the diameters of the fibers since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955). In the present invention one would have been motivated to optimize the difference between the greatest and smallest mean value of the diameters of the fibers in order to enhance the strength and resistance to ballistic projectiles.

In regards to claim 17, Bhatnagar discloses that polymer fibers are chosen from polyolefin fibers, polyvinyl alcohol fibers, polyamide fibers, polyester fibers (col. 6 lines 55-61).

In regards to claim 18, Bhatnagar discloses that the yars having a tenacity equal to or greater than 400 g/d and an energy-to-break equal to or greater than about 27 J/g (col. 6 lines 25-46).

In regards to claim 19, Bhatnagar discloses that the are made ultra high molecular weight polyethylene fibers (col. 7 lines 1-10).

In regards to claims 20-21, Bhatnagar discloses that the cross-overs in cross-plyed unidirectional composites (col. 4 lines 53-55). The plies are laminated together in a stacked array (col. 4 lines 29-33).

In regards to claim 22, Bhatnagar discloses an elastomer is added to the polymeric ply in an amount of 10% by weight (col. 9 lines 25-28).

In regards to claim 23, Bhatnagar discloses that the laminate has a thickness thinner than 0.1 mm (examples 5 and 8).

In regards to claim 24, Bhatnagar discloses that the laminates are used for ballistic resistant articles such as helmets, panels, and vests (col. 1 lines 53-55).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on M-F 730-5 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ELLEN S WOOD/
Examiner, Art Unit 1794

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794